US007231690B2

(12) **United States Patent**
Bushey

(10) **Patent No.: US 7,231,690 B2**
(45) **Date of Patent: Jun. 19, 2007**

(54) **FURNITURE GLIDE WITH TUBULAR FLANGED GROMMET FASTENER**

(76) Inventor: **Richard D. Bushey**, 1596-38th Ave., Kenosha, WI (US) 53140

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 16 days.

(21) Appl. No.: **10/704,417**

(22) Filed: **Nov. 7, 2003**

(65) **Prior Publication Data**

US 2004/0093687 A1 May 20, 2004

Related U.S. Application Data

(60) Provisional application No. 60/427,615, filed on Nov. 19, 2002.

(51) **Int. Cl.**
A47B 91/06 (2006.01)

(52) **U.S. Cl.** ..... **16/42 R**; 16/42 T; 16/37; 16/38; 248/188

(58) **Field of Classification Search** ..... 16/42 R, 16/42 T, 37–39, 30, 43; 248/188, 188.5, 248/188.6
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

336,346	A *	2/1886	Pratt	248/188.9
1,582,211	A *	4/1926	Fleming	16/42 T
1,867,736	A	7/1932	Finkeldey	
1,914,203	A *	6/1933	Herold	16/42 R
2,030,649	A	2/1936	Miller	
2,262,063	A	11/1941	Swarr	
2,262,064	A	11/1941	Swarr	
2,633,599	A	4/1953	Dolan	
2,753,586	A	7/1956	Metz	
2,794,205	A	6/1957	Skupas	
2,820,240	A	1/1958	Matys	
2,848,733	A	8/1958	Thornsbury	
2,876,485	A *	3/1959	Cowles	16/42 R
2,878,509	A	3/1959	Fisher	
2,933,754	A	4/1960	Winans	
2,954,636	A	10/1960	Gammache	
2,973,545	A *	3/1961	Kramcsak, Jr.	16/42 R
2,974,352	A	3/1961	Lockwood	
2,988,770	A	6/1961	Arenson	
2,992,509	A	7/1961	Gaenzle	
3,025,631	A *	3/1962	Reynolds	248/188.9
3,059,267	A	10/1962	Wilhelmi	
3,076,221	A *	2/1963	Reynolds	16/42 R
3,191,212	A	6/1965	Reiss, Sr. et al.	
3,342,445	A	9/1967	Bouwkamp	
3,353,231	A	11/1967	Levine	
3,366,991	A *	2/1968	Le Vasseur	16/42 R
3,640,496	A	2/1972	Duncan	
3,883,923	A	5/1975	England	
4,313,586	A *	2/1982	Grzesnikowski	248/188.4

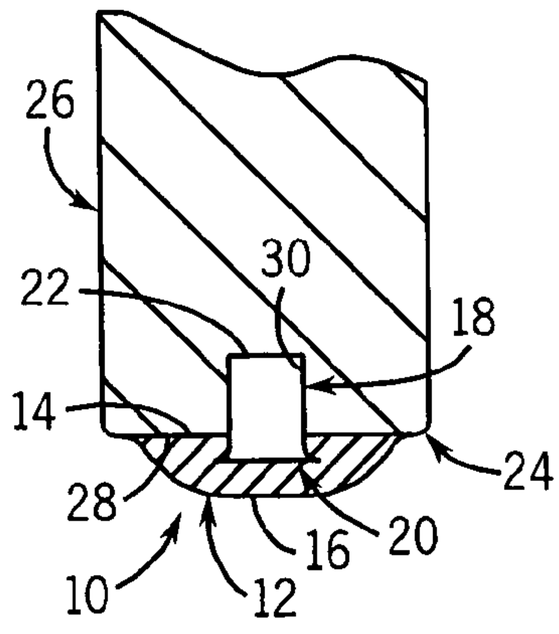
(Continued)

Primary Examiner—Katherine Mitchell
Assistant Examiner—Michael J. Kyle
(74) *Attorney, Agent, or Firm*—Boyle Gredrickson Newholm Stein & Gratz S.C.

(57) **ABSTRACT**

A furniture glide is provided for mounting on a terminal end of a furniture leg. The furniture glide includes a slider having an upper surface and a generally arcuate lower surface for engaging a supporting surface. A generally tubular fastener extends from the upper surface of the slider and is receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg. A spacing element may be positioned on the upper surface of the slider for spacing the upper surface of the slider from the furniture leg.

11 Claims, 2 Drawing Sheets



U.S. PATENT DOCUMENTS

4,327,461	A *	5/1982	Wisniewski	16/42 R
4,468,910	A	9/1984	Morrison	
D276,606	S	12/1984	Neuwirth	
4,576,357	A	3/1986	Schrepfer	
4,654,245	A	3/1987	Balzer et al.	
4,793,580	A *	12/1988	Richards	248/188
5,005,374	A	4/1991	Spitler	
5,010,621	A	4/1991	Bock	
5,042,764	A	8/1991	Carpinella et al.	
5,057,356	A	10/1991	Smith	
5,170,972	A	12/1992	Guell	
5,220,705	A	6/1993	Bushey	
D339,560	S	9/1993	Byrd	
5,287,595	A *	2/1994	Stevens, Jr.	16/42 T
D348,985	S	7/1994	Walker	
D353,505	S	12/1994	Rea	
5,426,818	A	6/1995	Bushey	
5,557,824	A	9/1996	Bushey	
5,573,212	A	11/1996	Palazzolo	
5,573,213	A	11/1996	Henderson et al.	
D376,944	S	12/1996	Dunn	
5,591,974	A	1/1997	Troyer et al.	
D381,865	S	8/1997	Gallagher	
D400,088	S	10/1998	Hurrie	
6,154,923	A	12/2000	Carpinella	
6,186,453	B1 *	2/2001	Redbone	248/188.4
6,280,817	B1	8/2001	McCrossin et al.	
6,324,725	B1	12/2001	Green	
6,354,231	B1 *	3/2002	Morris	108/144.11
D455,383	S	4/2002	Sneed	

* cited by examiner

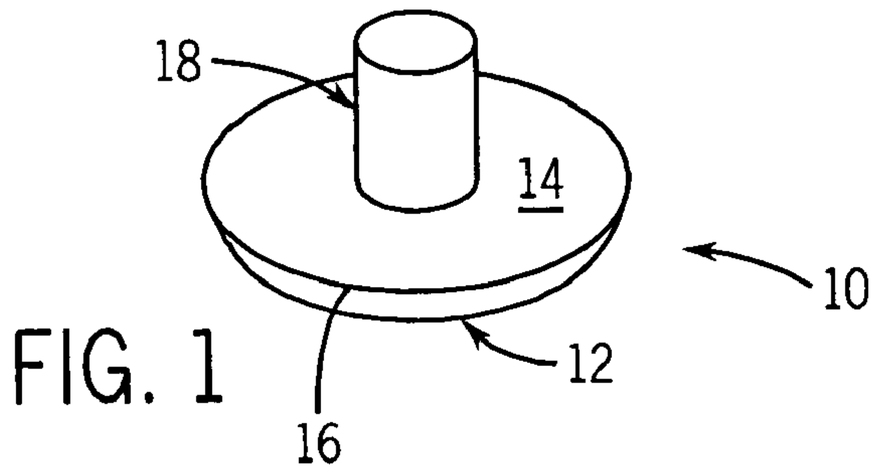


FIG. 1

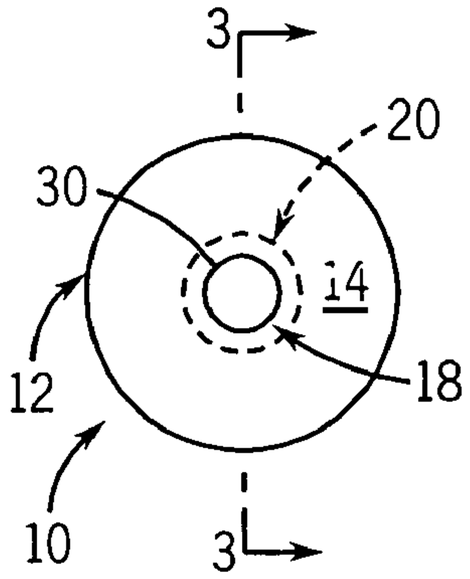


FIG. 2

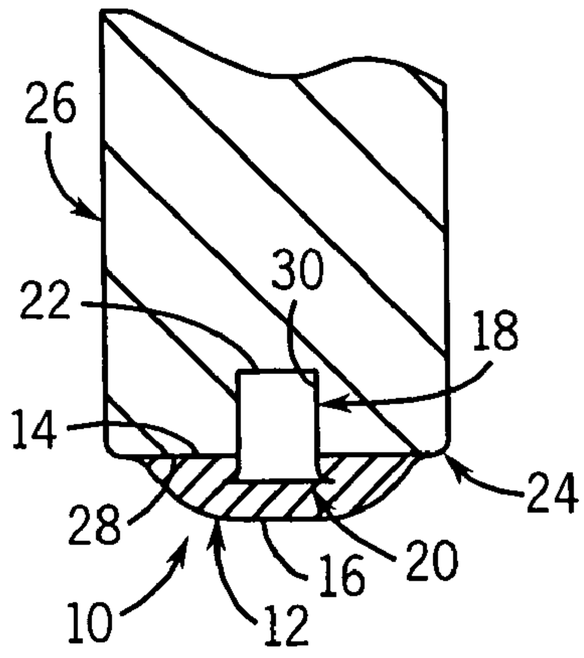


FIG. 3

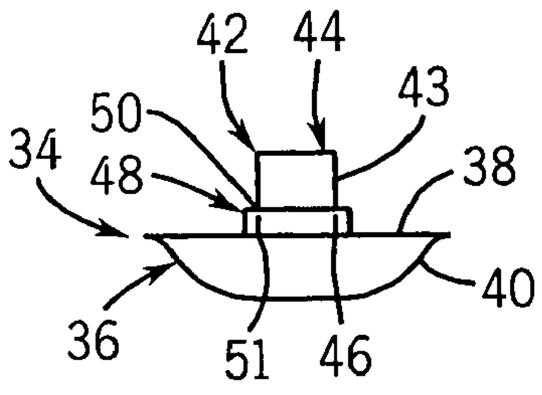


FIG. 4

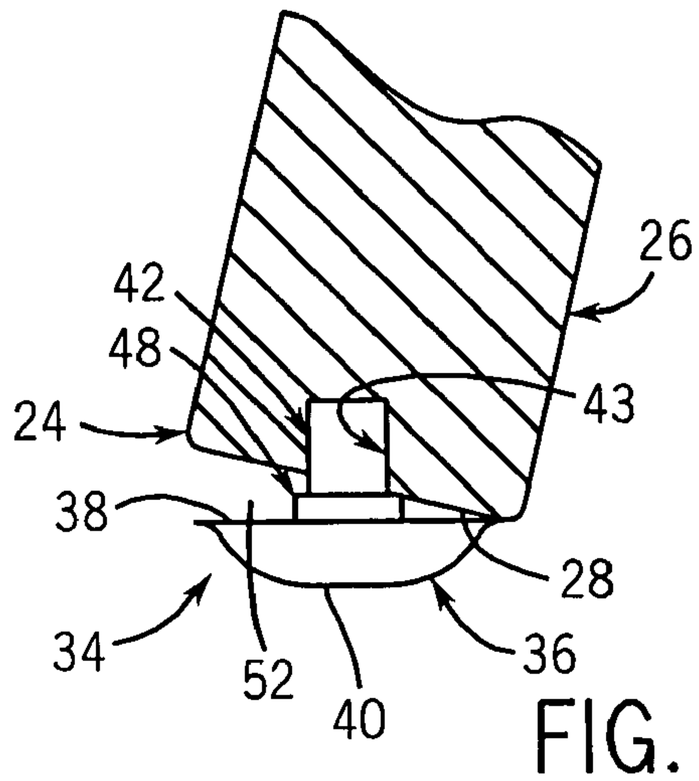


FIG. 5

FIG. 6a

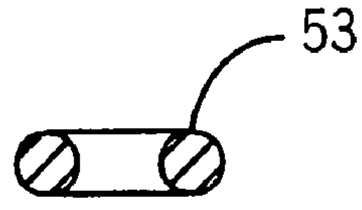


FIG. 6b

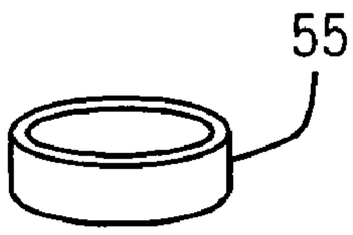


FIG. 7a

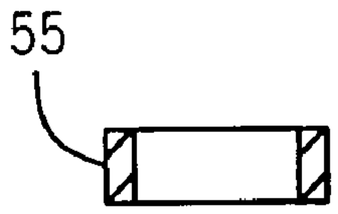


FIG. 7b

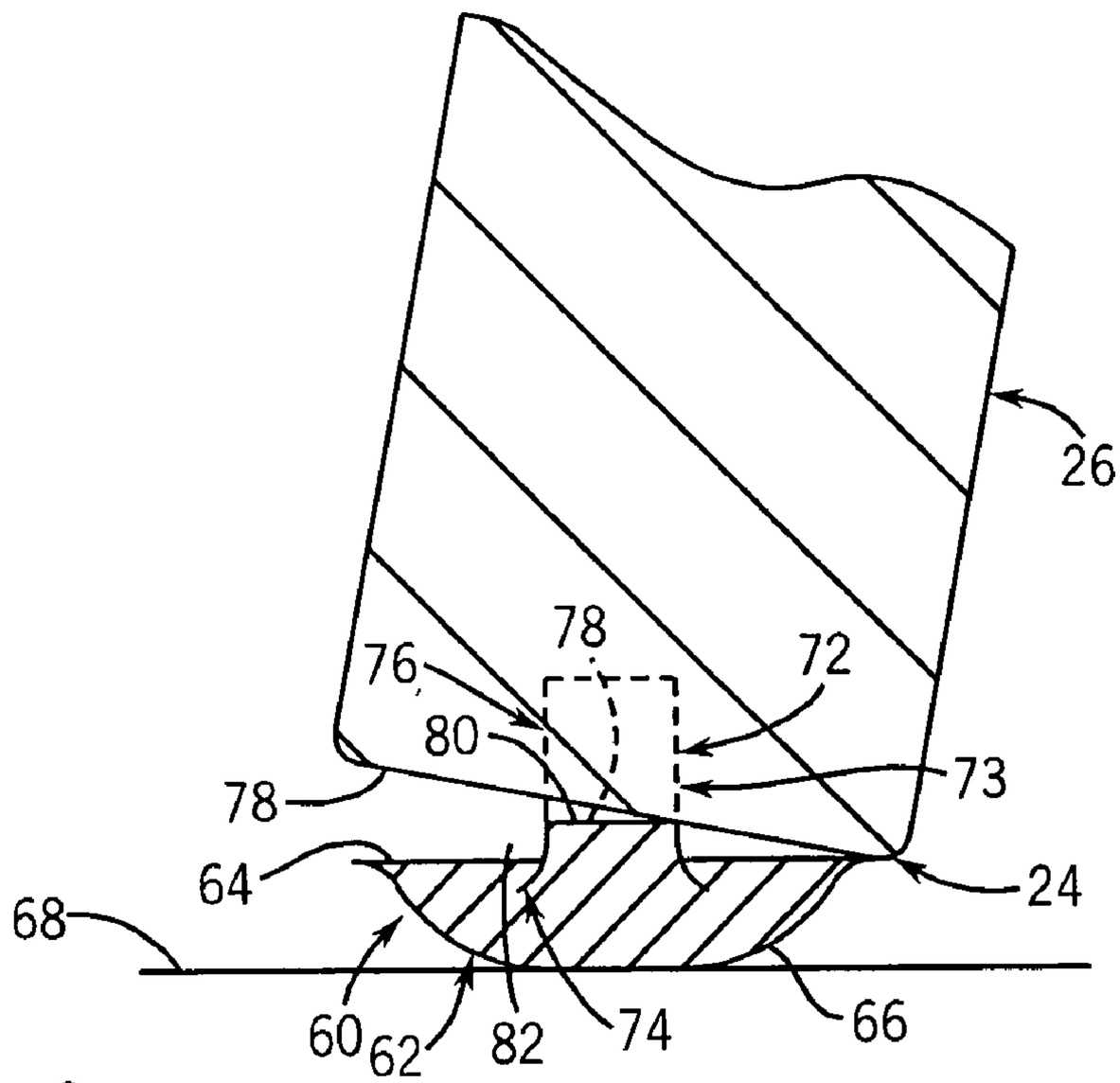


FIG. 8

FURNITURE GLIDE WITH TUBULAR FLANGED GROMMET FASTENER

CROSS-REFERENCE TO RELATED APPLICATION

This application claims the benefit of U.S. Provisional Application Ser. No. 60/427,615, filed Nov. 19, 2002.

FIELD OF THE INVENTION

This invention relates generally to furniture glides, and in particular, to a furniture glide that incorporates a tubular flanged grommet fastener to facilitate the mounting of the furniture glide to a furniture leg.

BACKGROUND AND SUMMARY OF THE INVENTION

Furniture glides or sliders are often mounted to the terminal ends of the legs of a piece of furniture to act as a buffer between the legs and the floor on which the piece of furniture rests. Typically, furniture glides take the form of convex discs having flat bottoms that rest on the floor. These discs are mounted to the furniture legs by means of adhesive, nails or the like.

While functional for their intended purposes, prior furniture glides have certain limitations. More specifically, repeated movement of the piece of furniture along a floor may cause the adhesive that attaches the furniture glides to the legs of the piece of furniture to fail such that the furniture glides become detached from the bottom of the piece of furniture. This, in turn, may result in the legs of the piece of furniture engaging and damaging the floor. Alternatively, the repeated movement of the piece of furniture along a floor may cause the nails used to mount the furniture glides on the legs of a piece of furniture to become loose and separate therefrom. As heretofore described, once the furniture glide become separated from a leg of a piece of furniture, the corresponding furniture leg may engage and damage the flooring. Therefore, it is highly desirable to provide a furniture glide that may be simply and easily secured to the leg of a piece of furniture so as to prevent damage to the floor upon which the piece of furniture rests.

Therefore, it is a primary object and feature of the present invention to provide a furniture glide that may be securely retained on the terminal end of a leg of a piece of furniture.

It is a further object and feature of the present invention to provide a furniture glide that is inexpensive to manufacture and simple to utilize.

It is a still further object and feature of the present invention to provide a furniture glide that may be utilized on the terminal end of a leg of a piece of furniture in order to prevent damage to the floor on which the piece of furniture sits.

In accordance with the present invention, a furniture glide is provided for mounting on a terminal end of a furniture leg. The furniture glide includes a base having an upper surface and a generally arcuate lower surface for engaging a supporting surface, such as flooring or carpeting. A generally tubular, grommet fastener extends from the upper surface of the base. The grommet fastener is receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg.

The furniture glide may also include a spacing collar positioned about the grommet fastener so as to be engageable with the upper surface of the base. The spacing collar may take the form of an o-ring or may be integrally molded to the grommet fastener. The grommet fastener extends along a longitudinal axis and has an upper end and a lower end. The lower end of the grommet fastener extends into the base below the upper surface. In addition, the lower end of the grommet fastener is flanged outwardly from the longitudinal axis.

In accordance with a further aspect of the present invention, a furniture glide is provided for mounting on a terminal end of a furniture leg. The furniture glide includes a slider having an upper surface and a generally arcuate lower surface terminating at a generally flat apex.to engage a supporting surface. A generally tubular fastener extends along a longitudinal axis and projects from the upper surface of the slider. The fastener is receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg.

The furniture glide may also include a spacing collar positioned about the fastener so as to be engageable with the upper surface of the slider. The spacing collar may take the form of an o-ring or may be integrally molded to the fastener. The fastener has an upper end and a lower end. The lower end of the fastener extends into the slider below the upper surface. In addition, the lower end of the grommet fastener is flanged outwardly from the longitudinal axis.

In accordance with a still further aspect of the present invention, a furniture glide is provided for mounting on a terminal end of a furniture leg. The furniture glide includes a slider having an upper surface and a generally arcuate lower surface for engaging a supporting surface. A generally tubular fastener extends along a longitudinal axis and projects from the upper surface of the slider. The fastener is receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg. A spacing element is positioned on the upper surface of the slider for spacing the upper surface of the slider from the furniture leg.

The furniture glide may also include a spacing element positioned about the fastener so as to be engageable with the upper surface of the slider. The spacing element may take the form of an o-ring or may be integrally molded to the fastener. The fastener has an upper end and a lower end. The lower end of the fastener extends into the slider below the upper surface. In addition, the lower end of the grommet fastener is flanged outwardly from the longitudinal axis.

BRIEF DESCRIPTION OF THE DRAWINGS

The drawings furnished herewith illustrate a preferred construction of the present invention in which the above advantages and features are clearly disclosed as well as others which will be readily understood from the following description of the illustrated embodiment.

In the drawings:

FIG. **1** is an isometric view of a first embodiment of a furniture glide in accordance with the present invention;

FIG. **2** is a top plan view of the furniture glide of FIG. **1**;

FIG. **3** is a cross-sectional view of the furniture glide of the present invention taken along line **3**—**3** of FIG. **2** wherein the furniture glide is mounted on a furniture leg;

FIG. **4** is a side elevational view of a second embodiment of a furniture glide in accordance with the present invention;

FIG. **5** is a side elevational view, partially in section, showing the furniture glide of FIG. **4** mounting on a furniture leg;

FIG. **6***a* is an isometric view of a first embodiment of a spacing collar for mounting on the grommet fastener of the furniture glide of the present invention;

FIG. **6***b* is a cross-sectional view of the spacing collar of FIG. **6***a;*

FIG. **7***a* is an isometric view of a second embodiment of a spacing collar for mounting on the grommet fastener of the furniture glide of the present invention;

FIG. **7***b* is a cross-sectional view of the spacing collar of FIG. **7***a*; and

FIG. **8** is a cross-sectional view of a third embodiment of a furniture glide in accordance with the present invention mounted on the terminal end of a furniture leg.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. **1**, a furniture guide in accordance with the present invention generally designated by the reference numeral **10**. Furniture glide **10** includes base **12** having a generally flat upper surface **14** and a generally arcuate floor engaging surface **16**. As best seen in FIG. **3**, floor engaging surface **16** of base **12** may terminate at a generally flat apex.

Furniture glide **10** further includes a tubular grommet fastener **18** defined by sidewall **30** that projects vertically from upper surface **14** of base **12** along a corresponding axis. Sidewall **30** of grommet fastener **18** has a lower flanged end **20** and an upper end **22**. Flanged end **20** of sidewall **30** of grommet fastener **18** is captured within the interior of base **12** so as to interconnect grommet fastener **18** with base **12**.

It is intended that furniture glide **10** be mounted on terminal end **24** of a furniture leg **26**. Terminal end **24** of furniture leg **26** includes a generally flat terminal surface **28**. In order to interconnect furniture glide **10** to furniture leg **26**, upper end **22** of sidewall **30** of grommet fastener **18** is positioned along terminal surface **28** of furniture leg **26** at a central location. Thereafter, a hammer or similar tool is used to tap the floor engaging surface **16** of base **12** of furniture glide **10** so as to urge sidewall **30** of grommet fastener **18** into terminal end **24** of furniture leg **26**. Sidewall **30** of grommet fastener **18** is driven into terminal end **24** of furniture leg **26** until such point that upper surface **14** of base **12** engages terminal surface **28** of furniture leg **26**. It is contemplated that sidewall **30** of grommet fastener **18** be frictionally retained within terminal end **24** of furniture leg **26**.

Referring to FIGS. **4**—**5**, an alternate embodiment of a furniture glide in accordance with the present invention is generally designated by the reference numeral **34**. Furniture glide **34** includes base **36** having a generally flat upper surface **38** and a generally arcuate floor engaging surface **40**. It is contemplated that floor engaging surface **40** of base **36** terminate at a generally flat apex.

Generally tubular grommet fastener **42** projects from upper surface **38** of base **36** along an axis generally perpendicular thereto. Grommet fastener **42** includes sidewall **43** having a predetermined diameter. Sidewall **43** has an upper end **44** and a lower end **46**. It is contemplated to integrally mold spacing collar **48** about the outer periphery of sidewall **43** of grommet fastener **42** adjacent lower end **46** thereof. Spacing collar **48** includes a lower surface **51** in engagement with upper surface **38** of base **36** and an upper surface **50**. The diameter of spacing collar **48** is greater than the diameter of sidewall **43** of grommet fastener **42**, for reasons hereinafter described.

In order to interconnect furniture glide **34** to furniture leg **26**, upper end **44** of grommet fastener **42** is positioned along terminal surface **28** of furniture leg **26** at a central location. Thereafter, a hammer or similar tool is used to tap floor engaging surface **40** of base **36** so as to urge sidewall **43** of grommet fastener **42** into terminal end **24** of furniture leg **26**. Sidewall **43** of grommet fastener **42** is driven into terminal end **24** of furniture leg **26** until such point that terminal surface **28** of furniture leg **26** engages upper surface **50** of spacing collar **48**, thereby providing a vertical gap **52** between terminal surface **28** of furniture leg **26** and upper surface **38** of base **36** of furniture glide **34**. Vertical gap **52** is partially defined by the outer periphery of spacing collar **48**. It is contemplated that sidewall **43** of grommet fastener **18** be frictionally retained within terminal end **24** of furniture leg **26**.

As best seen in FIG. **5**, it can be appreciated that the structure of furniture glide **34** allows for furniture glide **34** to be mounted on a furniture leg **26** having an angled terminal surface **28** or to be directly mounted at an angle to the longitudinal axis of furniture leg **26**. Alternatively, base **36** of furniture glide **34** may pivot on grommet fastener **42** to insure the apex of floor engaging surface **40** of base **36** of furniture glide **40** remains on constant contact with a supporting surface such as the floor or the like.

It can be appreciated that spacing collar **48** integrally molded about sidewall **43** of grommet fastener **42** may be replaced with o-ring **53**, FIGS. **6**A and **6**B, or a generally tubular collar **55**, FIGS. **7**A—**7**B, that are slidable over the outer periphery of sidewall **43** of grommet fastener **42**. As such, o-ring **53** or collar **55** acts to separate terminal surface **28** of furniture leg **24** from upper surface **38** of base **36** of furniture glide **34**, for reasons heretofore described.

Referring to FIG. **8**, a still further embodiment of a furniture glide in accordance with the present invention generally designated by the reference numeral **60**. Furniture glide **60** includes base **62** having a generally flat upper surface **64** and a generally arcuate floor engaging surface **66**. Floor engaging surface **66** of base **62** may terminate at a generally flat apex for engaging a supporting surface **68** such as the floor or the like.

Furniture glide **60** further includes grommet fastener **72** defined by sidewall **73** having a flared lower end **74** captured within base **62** and an upper end **76**. Sidewall **73** of grommet fastener **72** is generally tubular such that spacing portion **78** of base **62** may extend into the interior defined by sidewall **73** of grommet fastener **72** through lower end **74** thereof. Spacing portion **78** of base **62** includes a generally flat terminal surface **80**, for reasons hereinafter described.

In order to interconnect furniture glide **60** to furniture leg **26**, upper end **76** of sidewall **73** of grommet fastener **72** is positioned against terminal surface **28** of furniture leg **26** at a central location. A tool such as a hammer or the like is used to engage the apex of floor engaging surface **66** of base **62** so as to drive upper end **76** of sidewall **73** of grommet fastener **72** into terminal end **24** of chair leg **26**. Sidewall **73** of grommet fastener **72** is driven into terminal end **24** of furniture leg **26** until such point that terminal surface **28** of furniture leg **26** engages upper surface **80** of spacing portion **78** of base **62** within the interior of grommet fastener **72**. As described, gap **82** is provided between terminal surface **28** of furniture leg **26** and upper surface **64** of base **62** of furniture glide **60**. It can be appreciated that the structure of furniture glide **60** allows for furniture glide **60** to be mounted on the furniture leg **26** having an angled terminal surface **28** or to be mounted at an angle to the longitudinal axis of furniture leg **26**. This, in turn, insures that the apex of floor engaging surface **66** remains in contact with supporting surface **68**.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter that applicant regards as the invention.

I claim:

1. A furniture glide for mounting on a terminal end of a furniture leg, comprising:

a base having an upper surface and a generally arcuate lower surface for engaging a supporting surface; and

a hollow generally tubular, grommet fastener having a non-flanged upper end spaced from the upper surface of the base and an outwardly flanged lower end captured in the base the grommet fastener receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg and including:

an inner surface defining a passageway for receiving a first portion of the furniture leg therein, the passageway extends through the grommet fastener; and

an outer surface engageable with a second portion of the furniture leg;

wherein a portion of the base is received in the passageway adjacent the lower end of the grommet fastener.

2. The furniture glide of claim **1** further comprising a spacing collar positioned about the grommet fastener and engageable with the upper surface of the base.

3. The furniture glide of claim **2** wherein the spacing collar is an o-ring.

4. The furniture glide of claim **1** wherein the lower surface of the base terminates at a generally flat apex.

5. A furniture glide for mounting on a terminal end of a furniture leg, comprising:

a slider having an upper surface and a generally arcuate lower surface terminating at a generally flat apex to engage a supporting surface; and

a generally tubular fastener extending along a longitudinal axis and projecting from the upper surface of the slider, the fastener having an inner surface defining a passageway therethrough, a first non-flanged upper end receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg and a second flanged lower end captured with the slider such that a portion of the slider is received in the passageway.

6. The furniture glide of claim **5** further comprising a spacing collar positioned about the fastener and engageable with the upper surface of the slider.

7. The furniture glide of claim **6** wherein the spacing collar is an o-ring.

8. The furniture glide of claim **6** wherein the spacing collar is integrally molded with the fastener.

9. A furniture glide for mounting on a terminal end of a furniture leg, comprising:

a slider having an upper surface and a generally arcuate lower surface for engaging a supporting surface;

a generally tubular fastener extending along a longitudinal axis and projecting from the upper surface of the slider, the fastener having an inner surface defining a passageway therethrough a first non-flanged upper end receivable in the terminal end of the furniture leg for frictionally connecting the furniture glide to the furniture leg and a second flanged end captured in the slider such that a portion of the slider is received in the passageway; and

a spacing element on the upper surface of the slider for spacing the upper surface of the slider from the furniture leg.

10. The furniture glide of claim **9** wherein the spacing element includes an o-ring.

11. The furniture glide of claim **9** wherein the spacing element is integrally molded to the fastener.

* * * * *